

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

RECEIVED

AUG 16 2000

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)

Allocation of Frequencies in the)
1390-1393 MHz and 1429-1432 MHz Bands)
to the Non-Voice, Non-Geostationary Mobile)
Satellite Service)

RM-_____

To: The Commission

PETITION FOR RULEMAKING

FINAL ANALYSIS
COMMUNICATION SERVICES, INC.
Patricia A. Mahoney
Vice President, Regulatory Policy
9701-E Philadelphia Court
Lanham, MD 20706
(301) 459-4100

Aileen A. Pisciotta
Randall W. Sifers
KELLEY DRYE & WARREN LLP
1200 19th Street, N.W., Suite 500
Washington, DC 20036
(202) 955-9600

Counsel to
Final Analysis
Communication Services, Inc.

LEO ONE WORLDWIDE, INC.

Robert A. Mazer
Albert Shuldiner

VINSON & ELKINS, L.L.P.

1455 Pennsylvania Avenue, N.W.
Washington, DC 20004
(202) 639-6500

Counsel to
Leo One Worldwide, Inc.

ORBITAL COMMUNICATIONS CORPORATION

Stephen L. Goodman
HALPRIN, TEMPLE, GOODMAN & MAHER
Suite 950 North Tower
555 12th Street, N.W.
Washington, DC 20004
(202) 371-9100

Counsel to
Orbital Communications Corporation

August 16, 2000

No. of Copies rec'd 014
List ABCDE IB

SUMMARY

Herein Final Analysis Communication Services, Inc. ("Final Analysis"), Leo One Worldwide, Inc., ("Leo One"), and Orbital Communications Corporation ("ORBCOMM") jointly petition the Commission to commence a rulemaking proceeding to allocate the 1390-1393 MHz and 1429-1432 MHz frequency bands on a primary basis for Non-Voice, Non-Geostationary Mobile Satellite Service ("NVNG MSS").

At the recently concluded 2000 International Telecommunication Union World Radiocommunication Conference ("WRC-2000"), as the result of the intensive efforts undertaken during the past four years by the NVNG MSS industry and the U.S. government, the U.S. delegation obtained global support for its proposal to place on the agenda for WRC-03 the allocation of the 1390-1393 MHz and 1429-1432 MHz band on a global basis for NVNG MSS. The domestic allocation proposed herein will demonstrate U.S. support for the position advocated by the U.S. government at WRC-2000 and in other international fora and is essential to ensure that the United States achieves its international objective to obtain the critically needed global allocation of dedicated NVNG MSS feeder link spectrum.

NVNG MSS telecommunications systems are uniquely suited to provide low-cost, near real time, global coverage of high quality data information services to consumers, governments and businesses. Moreover, the low-cost global reach of these systems enable low-cost access to such services as e-mail, pager messaging, remote meter reading, and asset tracking to customers located in rural and thinly populated areas that are currently underserved, or served only at high cost, by existing or planned wireline and cellular communications systems. Accordingly, allocation of the subject bands to NVNG MSS ensures efficient use of the spectrum and is in the public interest.

The NVNG MSS industry has documented and demonstrated its need for this spectrum, and the U.S. government has strongly promoted its allocation to NVNG MSS on a global basis. Under the current circumstances, the public's interest in the broad range of economical and widely geographically available services offered by NVNG MSS will be harmed if all of the efforts expended over the past several years to obtain international NVNG MSS feeder link allocation are allowed to fail after they have been so successful.

TABLE OF CONTENTS

I.	INTRODUCTION.....	2
II.	NVNG MSS SYSTEMS PROVIDE NECESSARY SERVICES	4
III.	THE NVNG MSS INDUSTRY HAS A DEMONSTRATED NEED FOR ADDITIONAL FEEDER LINK SPECTRUM.....	5
A.	Currently Allocated Feeder Link Spectrum Is Insufficient.....	5
B.	The U.S. Delegation At WRC-2000 Obtained Global Support to Consider At WRC-2003 the 1390-1393 MHz and 1429-1432 MHz Bands for Allocation On A Global Basis to NVNG MSS Feeder Links.....	7
IV.	AN ALLOCATION TO NVNG MSS IS IN THE PUBLIC INTEREST.....	8
A.	A Domestic Allocation To NVNG MSS In The 1429-1432 MHz Band Is Critical To Ensuring Achievement of U.S. Goals In Obtaining Essential International Allocations for NVNG MSS Downlink Feeder Links	8
B.	The Requested Allocation for NVNG MSS Will Ensure Most Efficient and Effective Use of the Spectrum	10
V.	CONCLUSION	12

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Allocation of Frequencies in the)	RM-_____
1390-1393 MHz and 1429-1432 MHz Bands)	
to the Non-Voice, Non-Geostationary Mobile)	
Satellite Service)	

To: The Commission

PETITION FOR RULEMAKING

Final Analysis Communication Services, Inc. ("Final Analysis"), Leo One Worldwide, Inc. (formerly Leo One USA Corporation) ("Leo One"), and Orbital Communications Corporation ("ORBCOMM") (collectively, the "Parties"), all licensees in the Non-Voice, Non-Geostationary Mobile Satellite Service ("NVNG MSS"),¹ by their attorneys, and pursuant to Section 1.401 of the Commission's Rules, hereby jointly petition the Commission to commence a rulemaking proceeding to amend the U.S. Table of Allocations, at Section 2.106 of the Commission's Rules, to allocate a total of 6 MHz of spectrum in the 1390-1393 MHz and 1429-1432 MHz bands on a primary basis for NVNG MSS feeder link operations. As described below, such a domestic allocation is essential to ensuring successful achievement of the United States' international objective to obtain needed global allocations of dedicated NVNG MSS feeder link spectrum and will serve the public interest by assuring the most efficient utilization of the spectrum.

¹ Final Analysis Communication Services, Inc., *Order and Authorization*, 13 FCC Rcd 6618 (1998) ("*Final Analysis License*"), *Application for Clarification and Review*, filed May 1, 1998; Leo One USA Corp., *Order and Authorization*, 13 FCC Rcd 2801 (1998) ("*Leo One License*"); Orbital Communications Corp., *Order and Authorization*, 13 FCC Rcd 10828 (1998) ("*ORBCOMM Second Round License*").

I. INTRODUCTION

The Commission has long acknowledged that each NVNG MSS system requires dedicated feeder link spectrum, on a global basis, for both uplink and downlink communications.² Despite the critical need for dedicated feeder links, insufficient unencumbered spectrum is currently allocated, on an international or domestic basis, to NVNG MSS feeder link operations. In the international context, the 1390-1393 MHz and 1429-1432 MHz bands have been identified as the only frequencies suitable and available for global allocation for NVNG MSS feederlink operations. This particular spectrum is suitable because of its propagation characteristics and, perhaps more importantly, because of the potential for a global allocation. These frequencies are not heavily occupied in other countries and regions by other services that are highly sensitive to potential interference.

Over the past several years, the NVNG MSS industry and the U.S. government have worked very hard together to try to obtain a global allocation in these frequencies for NVNG MSS. At the 2000 International Telecommunication Union (“ITU”) World Radio Conference (“WRC-2000”), which just recently concluded, as a result of the intensive efforts undertaken during the past four years by the NVNG MSS industry and the U.S. government, the U.S. delegation obtained global support for its proposal to place on the agenda for WRC-03 the allocation of the 1390-1393 MHz and 1429-1432 MHz band on a global basis for NVNG MSS feeder links.³

² See, e.g., Amendment of Part 25 of the Commission’s Rules to Establish Rules and Policies Pertaining to the Second Processing Round of the Non-Voice, Non-Geostationary Mobile Satellite Service, *Report and Order*, 13 FCC Rcd 9111 (1997), ¶ 48.

³ See ITU-R Resolution 800 [GT PLEN-2/4] (WRC-2000), 1.16; ITU-R Resolution 127 (WRC-2000). The WRC-03 Agenda was subsequently approved by the ITU Council in July. Accordingly, the proposed allocation is now on the Agenda for WRC-03.

In light of these developments, now is the perfect time for the Commission to take positive action to demonstrate unequivocal support for the position advocated by the U.S. government at WRC-2000. The Parties are filing this petition precisely to facilitate Commission action and demonstrate industry support for the WRC-03 agenda item. Commission action on this petition is necessary to avoid confusion in the global arena.

The frequencies in the 1390-1393 MHz and 1427-1432 MHz bands are of interest to a number of other U.S. parties and have been the subject of numerous comments in several Commission proceedings, including the recently concluded proceeding establishing a new Wireless Medical Telemetry Service (“WMTS”) and granting WMTS a primary allocation in the 1429-1432 MHz band.⁴ Additional petitions for rulemaking filed by parties in other services also are pending.⁵ Although the Commission previously has informally acknowledged the interests of the NVNG MSS industry in this spectrum,⁶ the more recent grant of a primary allocation in the 1429-1432 MHz band to WMTS appears contradictory and may significantly adversely impact any chance of success in obtaining the necessary NVNG MSS global allocation

⁴ See Amendment of Parts 2 and 95 of the Commission’s Rules to Create a Wireless Medical Telemetry Service, ET Docket 99-255 (“*WMTS Rulemaking*”), *Report and Order*, FCC 00-211 (released July 12, 2000) (“*WMTS Order*”).

⁵ See Land Mobile Communications Council *Petition for Rulemaking*, dated April 22, 1998, RM-9267, requesting that the Commission allocate the 1390-1400 MHz and 1427-1432 MHz bands for private land mobile services under Part 90 of the Commission’s Rules; MicroTrax™ *Petition for Rulemaking*, dated November 22, 1999, RM-9797, requesting that the Commission commence a comprehensive rulemaking proceeding to allocate certain frequency bands made available pursuant to the Balanced Budget Act of 1997, including the 1390-1400 MHz and 1427-1432 MHz bands, and to establish a new Personal Location and Monitoring Service (“PLMS”) in some of the identified spectrum.; Itron, Inc. *Petition for Rulemaking*, dated February 29, 2000, RM-9854 (“*Itron Petition*”), requesting that the Commission allocate the 1427-1432 MHz band for automatic meter reading (“AMR”) and utility telemetry on a primary basis.

⁶ See Amendment of Parts 2 and 95 of the Commission’s Rules to Create a Wireless Medical Telemetry Service, *Notice of Proposed Rulemaking*, 14 FCC Rcd 16719 (1999) (“*WMTS NPRM*”), ¶ 14 and n. 20.

at WRC-03.⁷ Additionally, because the Commission has indicated its intent to consider other requests for allocation in these same frequencies,⁸ it is important that the requirements of the NVNG MSS industry for a domestic, as well as an international, allocation for feeder link spectrum in these particular bands now receive full and due consideration.

II. NVNG MSS SYSTEMS PROVIDE NECESSARY SERVICES

NVNG MSS telecommunications systems are uniquely suited to the provision of low-cost, near real time, high quality data information services to consumers and governments as well as companies in the transportation, environmental, utility, oil and gas, agribusiness, automotive and other industrial sectors. These services include personal and business messaging services, such as paging and e-mail, voice mail, file transfers, mobile asset management and tracking, remote monitoring and control, data acquisition, environmental monitoring and disaster communications.

The low-cost global reach of NVNG MSS systems addresses many critical service needs not met by other technologies. Ground terminals can be equipped with global positioning systems ("GPS") receivers to provide quick, accurate low-cost positioning information for all types of cargo shipping containers, rail cars, barges and trucks. Terminals also can be equipped with microprocessors for data monitoring and control. With these terminals, users can monitor crop conditions and feed supplies on large farms, climate conditions at weather stations, water quality conditions, utility usage, consumable supplies in vending machines and copy machines, point-of-sale reports from retail stores, and a wide variety of inventory management data. Unlike

⁷ Concurrent with this Petition for Rulemaking, the Parties are filing a Petition for Reconsideration of the *WMTS Order* requesting that the Commission reconsider the specific allocation of the 1429-1432 MHz band on a primary basis to the new WMTS.

⁸ In the *WMTS Order*, at n.60, the Commission stated that it would open a "future comprehensive proceeding to allocate the remaining government transfer spectrum in the 1390-1400 MHz and 1427-1435 MHz bands."

the digital and broadband services that are now being deployed in the large metropolitan centers of the U.S., NVNG MSS telecommunications systems enable low-cost access to such services as e-mail, pager messaging, remote meter reading, and asset tracking by customers located in rural and thinly populated areas that are currently underserved, or served only at high cost, by existing or planned wireline and cellular communications systems.

The “non-voice” design emphasis is the source of the NVNG MSS cost advantage over Big LEO and geostationary satellite systems, as the technology to perform the non-voice functions is less expensive, proven and readily available. NVNG MSS systems provide global coverage utilizing smaller satellites in lower orbits and less complex, less costly technology elements both in space and on the ground. As a result, NVNG MSS systems are extremely economical to build, launch, operate, communicate with, and maintain.

III. THE NVNG MSS INDUSTRY HAS A DEMONSTRATED NEED FOR ADDITIONAL FEEDER LINK SPECTRUM

A. Currently Allocated Feeder Link Spectrum Is Insufficient

Communications to and from NVNG MSS satellites are made over both service and feeder links. Service links allow subscribers to communicate directly with orbiting satellites from low-cost fixed or mobile terminals. Communications over these links are typically very short, “burst” type transmissions. Consequently, service links, currently allocated in the UHF and VHF bands, can be and are shared among the licensed NVNG MSS systems as well as between NVNG MSS and terrestrial operations.

Feeder links, on the other hand, are critical to the commercial implementation of NVNG MSS-based data services because feeder links support data transfers and telemetry, tracking and control (“TT&C”) functions between earth stations and the satellites. Feeder link transmissions

require both continuous communication with the satellite, as well as sufficient dedicated spectrum in both uplink and downlink directions, to ensure proper operation of the constellation and to achieve full system capacity.

Although NVNG MSS systems utilize a relatively small amount of spectrum overall, particularly in comparison to voice or broadband Big LEO systems, there is far from enough spectrum in the bands allocated internationally and in the U.S. to NVNG MSS to accommodate all of the licensees' current requirements. For example, in the United States, each of the four NVNG MSS commercial licensees has only 50 kHz of uplink feeder link spectrum in VHF spectrum bands. This spectrum is heavily utilized by other incumbent users and is not very suitable for all NVNG MSS feeder link operations on a global basis due to coordination constraints imposed by other foreign satellite systems. Moreover, the need to utilize VHF frequencies for feeder links limits the availability of that spectrum for much needed service links. Most importantly, none of the NVNG MSS second round licensees has been assigned any dedicated downlink feeder link spectrum, which forces them to share downlink feeder spectrum with other licensees.

The insufficient allocation of spectrum has required the licensees to employ extraordinary measures to ensure efficient spectrum utilization, including careful coordination among systems, the development of innovative and technically complex frequency sharing techniques, and even reliance upon future international allocations for NVNG MSS. Uncertainty about the availability of adequate spectrum for feeder link operations constrains the ability of some NVNG MSS system operators to make business assumptions about how to deploy their constellation infrastructure and network operations effectively.

The NVNG MSS industry's need for additional spectrum will become increasingly acute

as more NVNG MSS systems become operational and their traffic loads increase. Without additional feeder link spectrum, the ability of some NVNG MSS operators to provide highly economical commercial data services to the public in urban as well as rural areas will be seriously constrained.

B. The U.S. Delegation At WRC-2000 Obtained Global Support to Consider At WRC-2003 the 1390-1393 MHz and 1429-1432 MHz Bands for Allocation On A Global Basis to NVNG MSS Feeder Links

At WRC-2000, the U.S. delegation obtained global support for its proposal to consider at WRC-03 the 1390-1393 MHz and 1429-1432 MHz bands for allocation on a global basis to NVNG MSS services for feeder link uplinks and downlinks, respectively. U.S. efforts to obtain additional global allocations for NVNG MSS feeder links began with the development of proposals for WRC-95. At that time, the NVNG MSS industry was encouraged to study the frequency bands around 1.4 GHz for possible international allocation for NVNG MSS feeder links. Recognizing the critical need for the allocation of more feeder link spectrum to NVNG MSS on a global basis, the United States introduced sharing studies into ITU-R Working Party 8-D in 1996 on NVNG MSS feeder links in the 1.4 GHz bands,⁹ but there was insufficient time for technical review to allow the consideration of allocations at WRC-97. Consequently, the United States proposed that WRC-97 initiate technical sharing studies of the use of 1390-1400 MHz for NVNG MSS uplink feeder links and 1427-1432 MHz for NVNG MSS downlink feeder links, and Resolution 127 to this effect was approved.¹⁰

Between the Conference Preparatory Meeting in 1997 and WRC-97, the U.S. parties performed studies and hardware demonstrations (through Texas A&M University) to confirm the

⁹ See ITU-R Doc. 8-D/142-D, 18 Oct. 1996.

¹⁰ See United States Proposals for the 1997 World Radiocommunication Conference, October 1997, Document No. USADD.R01, October 17, 1997 version, page 6.

feasibility of sharing between NVNG MSS in the 1.4 GHz band with existing applications, including radio astronomy, earth exploration-satellites (“EES”), and radiolocation in the same and adjacent bands. These studies and demonstrations showed sufficient promise to share with these other services that WRC-97 resolved “as a matter of urgency to carry out studies to determine the operational and technical measures required to facilitate sharing in the portions of the band 1390-1400 MHz” between NVNG MSS and existing services.¹¹ Similarly, WRC-97 also resolved “as a matter of urgency” to carry out further studies for sharing in the 1427-1432 MHz band between NVNG MSS downlink feeder links and existing in-band services.¹² In response to the WRC-97 directive to undertake additional studies, an extensive record was developed in preparation for WRC-2000 that demonstrated the need for additional feeder link spectrum to support anticipated demand for NVNG MSS services and the sharing capabilities of the NVNG MSS systems.

The years of effort and technical studies and WRC negotiation have resulted in the successful achievement of the U.S. WRC-2000 objectives, with the proposed allocation of these frequencies to NVNG MSS on the very next WRC agenda. Under these circumstances, the Parties believe that the NVNG MSS industry has established a priority for a primary allocation in the bands requested here.

IV. AN ALLOCATION TO NVNG MSS IS IN THE PUBLIC INTEREST

A. A Domestic Allocation To NVNG MSS In The 1429-1432 MHz Band Is Critical To Ensuring Achievement of U.S. Goals In Obtaining Essential International Allocations for NVNG MSS Downlink Feeder Links

In its recent *WMTS Order*, the Commission noted that “a domestic allocation for Little Leo feeder links would be of little value without an international allocation due to the

¹¹ See Resolution 127 (WRC-97), *resolves* 1.

¹² *Id.*, *resolves* 2.

international nature of this service.”¹³ To the contrary, a domestic allocation is necessary at this time to ensure that the international allocation will be forthcoming. A primary allocation in the 1429-1432 MHz band to WMTS, on the other hand, will jeopardize the international allocation for either downlink or uplink feeder links, now within sight. At least a primary domestic allocation must be made to NVNG MSS to demonstrate unequivocally to other nations that the U.S. government will make the same commitment to support the NVNG MSS industry as it so successfully encouraged numerous other nations to make at WRC-2000.

In the *WMTS NPRM*, the Commission indicated that it did not intend to take any action in that proceeding that would “compromise or foreclose” an international allocation of feeder link spectrum to NVNG MSS. Yet, it is difficult to interpret a primary allocation to WMTS in the 1429-1432 MHz band as anything other than abandonment by the Commission of the position so aggressively and successfully advocated by the U.S. Delegation at WRC-2000 – virtually contemporaneously with the adoption of the *WMTS Order* – favoring a global allocation of the same spectrum for NVNG MSS downlink feeder links. Abandonment of the U.S. efforts to obtain this spectrum allocation for NVNG MSS would damage the credibility of U.S. advocacy efforts, erode international support, and possibly doom to failure any further effort to obtain international allocations for NVNG MSS in this band.¹⁴ It could also raise questions internationally about U.S. support for the U.S. satellite industry. Due to the difficulty of finding spectrum suitable for global allocations, and the long lead times needed to perform technical studies for such allocations, any action that chills domestic and international support for a global

¹³ *WMTS Order* at ¶21.

¹⁴ Any further undermining of the U.S. position on allocation of the 1429-1432 MHz band for downlink feeder links necessarily will have the same impact on international support for allocation of the companion 1390-1393 MHz band for up link feeder links.

allocation for NVNG MSS feeder links may preclude any other global allocations for NVNG MSS service.

The Parties respectfully submit that, under the current circumstances, the public's interest in the broad range of economical and widely geographically available services offered by NVNG MSS will be harmed if all of the efforts expended over the past several years to obtain international NVNG MSS feeder link allocations are allowed to fail after they have been so successful. The Commission should not undermine these efforts now but instead should, and can, support them with a domestic primary allocation.

B. The Requested Allocation for NVNG MSS Will Ensure Most Efficient and Effective Use of the Spectrum

In exercising its spectrum allocation responsibilities, the Commission seeks, unless the public interest deems otherwise, to make allocations that provide licensees with the flexibility to offer a multiplicity of services based on the particular demands of the market. Allocation of the subject bands to NVNG MSS ensures efficient use of the spectrum and is in the public interest. NVNG MSS is an economical service utilizing a very small amount of spectrum overall but offering multifaceted services to a plethora of consumer and industrial sectors. On the other hand, allocation of these bands on a primary basis to other services would preclude the use of these bands by the NVNG MSS industry for feeder link operations, thereby limiting the service options that can be offered to the public by some of the NVNG MSS systems. Other parties with interests in these bands can be accommodated elsewhere or on a secondary basis.¹⁵ In contrast, no clear alternative spectrum has been identified for allocation to the NVNG MSS industry to

¹⁵ See the comments of Final Analysis and ORBCOMM in the *WMTS Rulemaking*. Also, as Final Analysis stated in its comments and reply comments to the Itron Petition, Itron has failed to demonstrate that AMR and utility telemetry cannot continue to operate on a secondary basis in the 1429-1432 MHz band. Consequently, a primary allocation in this band to Itron is simply not justified.

meet its critical need for additional feeder link spectrum. The spectrum is needed, not only to achieve dedicated feeder link spectrum, but to relieve the potential crowding that would be caused by operating feeder links in the service link spectrum as is currently required.

I. CONCLUSION

For the reasons stated above, the Parties respectfully request the Commission to initiate a proceeding to amend the Table of Allocations at Section 2.106 to allocate a total of 6 MHz of spectrum in the 1390-1393 MHz and 1429-1432 MHz bands on a primary basis for NVNG MSS feeder link operations. In the event the Commission opens a comprehensive rulemaking proceeding to consider competing uses of these bands, the Commission should ensure that the allocation of part or all of the 1390-1393 MHz and 1429-1432 MHz bands remains consistent with the U.S. government's support for the global allocation of those frequencies for NVNG MSS.

Respectfully submitted,

**FINAL ANALYSIS COMMUNICATION
SERVICES, INC.**

By: /s/ Patricia A. Mahoney
Patricia A. Mahoney
Vice President, Regulatory Policy
9701-E Philadelphia Court
Lanham, MD 20706
(301) 459-4100

By: /s/ Aileen A. Pisciotto
Aileen A. Pisciotto
Randall W. Sifers
KELLEY DRYE & WARREN LLP
1200 19th Street, N.W., Suite 500
Washington, DC 20036
(202) 955-9600
Counsel to
Final Analysis
Communication Services, Inc.

August 16, 2000

LEO ONE WORLDWIDE, INC.

By: /s/ Robert A. Mazer
Robert A. Mazer
Albert Shuldiner
VINSON & ELKINS, L.L.P.
1455 Pennsylvania Avenue, N.W.
Washington, DC 20004
(202) 639-6500
Counsel to Leo One Worldwide, Inc.

ORBITAL COMMUNICATIONS CORPORATION

By: /s/ Stephen L. Goodman
Stephen L. Goodman
HALPRIN, TEMPLE, GOODMAN & MAHER
Suite 950 North Tower
555 12th Street, N.W.
Washington, DC 20004
(202) 371-9100
Counsel to Orbital Communications Corporation

CERTIFICATE OF SERVICE

I, Beatriz Viera, hereby certify that a true and correct copy of the foregoing **Petition for Rulemaking**, on behalf of Final Analysis Communication Services, Inc., Leo One Worldwide, Inc., and Orbital Communications Corporation was delivered by hand or regular mail this 16th day of August 2000, to the individuals on the following list:

Chairman William E. Kennard
Federal Communications Commission
445 12th Street, S.W., Room 8-B201
Washington, DC 20554

Commissioner Harold Furchtgott-Roth
Federal Communications Commission
445 12th Street, S.W., Room 8-A302
Washington, DC 20554

Commissioner Susan Ness
Federal Communications Commission
445 12th Street, S.W., Room 8-B115
Washington, D.C. 20554

Commissioner Michael K. Powell
Federal Communications Commission
445 12th Street, S.W., Room 8-A204
Washington, D.C. 20554

Commissioner Gloria Tristani
Federal Communications Commission
445 12th Street, S.W., Room 8-C302
Washington, D.C. 20554

Clint Odom, Esq.
Legal Advisor to the Chairman
Federal Communications Commission
445 12th Street, S.W., Room 8-B201N
Washington, D.C. 20554

Bryan Tramont, Esq.
Legal Advisor to
Commissioner Furchtgott-Roth
Federal Communications Commission
445 12th Street, S.W., Room 8-A302B
Washington, D.C. 20554

Mark D. Schneider, Esq.
Legal Advisor to Commissioner Ness
Federal Communications Commission
445 12th Street, S.W., Room 8-B115C
Washington, D.C. 20554

Peter A. Tenhula, Esq.
Legal Advisor to Commissioner Powell
Federal Communications Commission
445 12th Street, S.W., Room 8-A204F
Washington, D.C. 20554

Adam D. Krinsky, Esq.
Legal Advisor to Commissioner Tristani
Federal Communications Commission
445 12th Street, S.W., Room 8-C302F
Washington, D.C. 20554

Donald Abelson, Chief
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Thomas S. Tycz, Chief
Satellite and Radiocommunication Division
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Cassandra Thomas
Deputy Chief, International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Fern Jarmulnek, Chief
Satellite Policy Branch
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

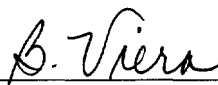
Harry Ng, Engineer Advisor
Satellite and Radiocommunication Division
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Mr. Mark Young
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Dale N. Hatfield, Chief
Office of Engineering and Technology
Federal Communications Division
445 12th Street, S.W., Room 7-C155
Washington, D.C. 20554

Julius Knapp, Chief
Policy & Rules Division
Office of Engineering and Technology
Federal Communications Division
445 12th Street, S.W., Room 7-B133
Washington, D.C. 20554

Lisa Gaisford
Deputy Chief
Policy & Rules Division
Office of Engineering and Technology
Federal Communications Division
445 12th Street, S.W.
Washington, D.C. 20554



Beatriz Viera